KTI
NETWORKS

Installation Guide
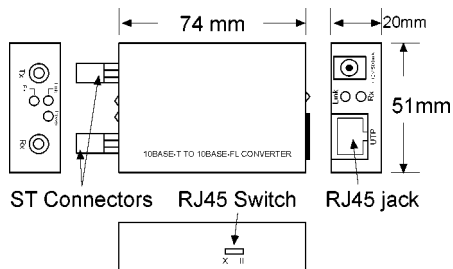## Ethernet Media Converter
Model: KC-10FM

General Description

KC-10FM Ethernet media converter is designed to be a connection interface between a 10BASE-T Ethernet UTP cable and 10BASE-FL fiber cable. It features a RJ-45 connector and a pair of ST fiber optic connectors.

The converter complies with IEEE 802.3 10BASE-T and 10BASE-FL standard and supports a UTP cable up to 100 meters and a fiber optic cable up to 2000 meters with no increasing on the hop count in the network.

Specifications

- Complies with IEEE 802.3 10BASE-T and 10BASE-FL std.
- Supports UTP cable up to 100 meters (328 feet)
- Supports fiber optic cable up to 2000 meters (6500 feet)
- Supports LED indications for the Power, UTP Link, UTP Receiving, Fiber Link, and Fiber Receiving status
- Environment: Temperature 0 - 40°C
                   Humidity 10-90% non condensing
- Dimension: 74 mm x 51 mm x 20 mm
- Power: +12V / 500mA minimum

Connectors & Cables

10BASE-T RJ-45 Connector
One RJ-45 switch is provided for selecting the type of RJ-45 connector as follows:

RJ-45 Switch	RJ-45 Type
X position	MDI-X
II position	MDI-I

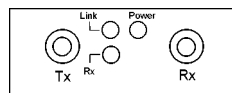| RJ-45 Pin	MDI-X type	MDI-I type
1	Rx+	Tx+
2	RX-	Tx-
3	Tx+	Rx+
6	Tx-	Rx-

It allows you to make all UTP connections using common straight-through UTP.

10BASE-T UTP Cable
Cable type: Category 3, 4 or 5
Maximum cable distance: 100 meters (328 feet)

Fiber Optic Connectors
Two ST connectors are provided for fiber optic cable connection. One is labeled "Tx" for transmitting operation. The other is labeled "Rx" for receiving operation.
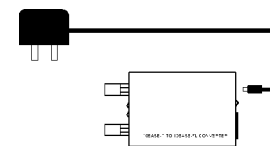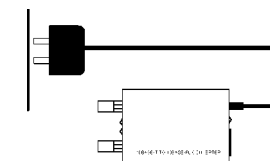

Fiber Optic Cable
Cable type: 62.5/125 mm multimode fiber (recommended)
Maximum cable distance: 2000 meters (6500 feet)

Installation

1. Install the media converter with the DC power adapter provided. (+12VDC, 500mA)
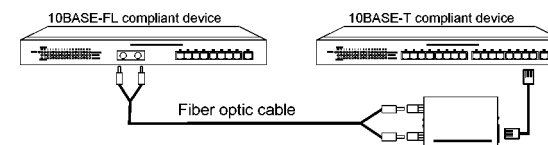

2. Connect the power adapter cable to the media converter before connecting the adapter to the AC outlet.
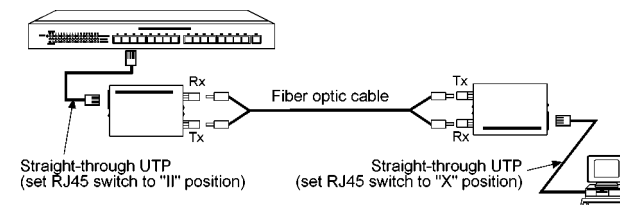

3. Do not connect more than two media converters in series.
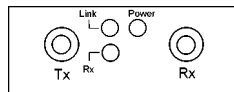
Making Network Connections
The following example illustrates a connection from a 10BASE-T port of one hub to a 10BASE-FL port of another hub through a media converter.
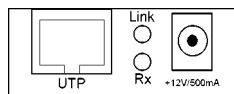

The following example illustrates a connection from a 10BASE-T port of one hub to a 10BASE-T NIC on a computer through a media converter.

Interpreting LED Indicators

LED	Status	State	Interpretation
Power	Power status	On	Converter is on.
		Off	Converter is off.
Link	Fiber link	On	The fiber link is ok.
		Off	No link or the link is faulty.
Rx	Receiving status	Blink	Receiving is in operation.
		Off	No fiber receiving.

LED	Status	State	Interpretation
Link	UTP link	On	The UTP link is ok.
		Off	No link or the link is faulty.
Rx	Receiving status	Blink	Receiving is in operation.
		Off	No fiber receiving.

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TRADEMARKS
Ethernet is a registered trademark of Xerox Corp.

WARNING:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference in which case the user will be required to correct the interference at his own expense.
NOTICE:
(1) The changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment.
(2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

CISPR A COMPLIANCE:
This device complies with EMC directive of the European Community and meets or exceeds the following technical standard.
EN 55022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment. This device complies with CISPR Class A.
WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE NOTICE
Marking by the symbol **CE** indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards:
EN 55022: Limits and Methods of Measurement of Radio Interference characteristics of Information Technology Equipment.
EN 50082/1:Generic Immunity Standard -Part 1: Domestic Commercial and Light Industry.
EN 60555-2: Disturbances in supply systems caused by household appliances and similar electrical equipment - Part 2: Harmonics.
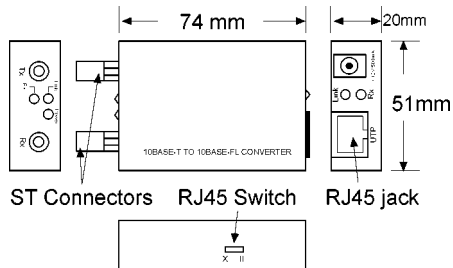
Installation Guide
10BASE-T/10BASE-FL
Ethernet Media Converter

DOC. 980510-KC10FM-NK

P/N: 750-0111-002

General Description

The 10BASE-T/10BASE-FL Ethernet media converter is designed to be a connection interface between a 10BASE-T Ethernet UTP cable and 10BASE-FL fiber cable. It features a RJ-45 connector and a pair of ST fiber optic connectors.

The converter complies with IEEE 802.3 10BASE-T and 10BASE-FL standard and supports a UTP cable up to 100 meters and a fiber optic cable up to 2000 meters with no increasing on the hop count in the network.

Specifications

- Complies with IEEE 802.3 10BASE-T and 10BASE-FL std.
- Supports UTP cable up to 100 meters (328 feet)
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- Supports LED indications for the Power, UTP Link, UTP Receiving, Fiber Link, and Fiber Receiving status
- Environment: Temperature 0 - 40°C
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- Dimension: 74mm x 51mm x 20mm
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Connectors & Cables

10BASE-T RJ-45 Connector

One RJ-45 switch is provided for selecting the type of RJ-45 connector as follows:

RJ-45 Switch	RJ-45 Type
X position	MDI-X
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RJ-45 Pin	MDI-X type	MDI-I type
1	Rx+	Tx+
2	RX-	Tx-
3	Tx+	Rx+
6	Tx-	Rx-

It allows you to make all UTP connections using common straight-through UTP.

10BASE-T UTP Cable

Cable type: Category 3, 4 or 5
Maximum cable distance: 100 meters (328 feet)

Fiber Optic Connectors

Two ST connectors are provided for fiber optic cable connection. One is labeled "Tx" for transmitting operation. The other is labeled "Rx" for receiving operation.
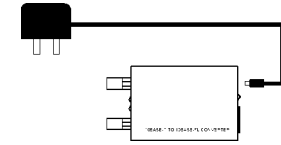

Fiber Optic Cable

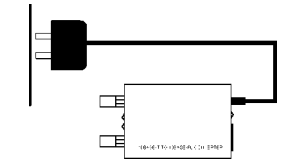Cable type: 62.5/125 mm multimode fiber (recommended)
Maximum cable distance: 2000 meters (6500 feet)

Installation

1. Install the media converter with the DC power adapter provided. (+12VDC, 500mA)
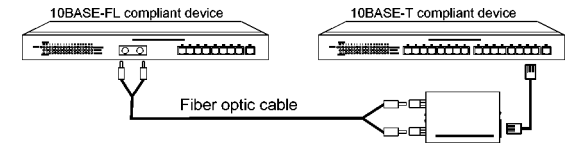

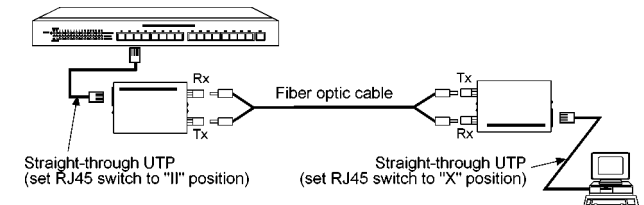2. Connect the power adapter cable to the media converter before connecting the adapter to the AC outlet.

3. Do not connect more than two media converters in series.
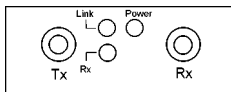
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The following example illustrates a connection from a 10BASE-T port of one hub to a 10BASE-FL port of another hub through a media converter.
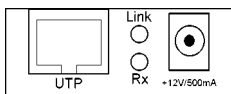

The following example illustrates a connection from a 10BASE-T port of one hub to a 10BASE-T NIC on a computer through a media converter.

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Link	UTP link	On	The UTP link is ok.
		Off	No link or the link is faulty.
Rx	Receiving status	Blink	Receiving is in operation.
		Off	No fiber receiving.